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XILINX, INC.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

XILINX, INC.,

Plaintiff,

v.

INTELLECTUAL VENTURES I LLC,
INTELLECTUAL VENTURES II LLC,

Defendants.

Case No. 3:11-cv-00671 SI

**SECOND AMENDED COMPLAINT
FOR DECLARATORY JUDGMENT
OF PATENT NON-INFRINGEMENT
AND INVALIDITY**

DEMAND FOR JURY TRIAL

Xilinx, Inc. ("Xilinx" or "Plaintiff"), by and through its undersigned counsel, complains against Intellectual Ventures I LLC and Intellectual Ventures II LLC, as follows:

NATURE OF THE ACTION

1. In this action, Xilinx seeks a declaration that certain products made, used, sold, offered for sale, or imported by Xilinx ("the Accused Products") do not infringe several patents asserted by Defendants against Xilinx ("the Asserted Patents"). Xilinx also seeks a declaration of invalidity and non-infringement of the Asserted Patents.

THE PARTIES

2. Xilinx is a Delaware corporation with its principal place of business at 2100 Logic Drive, San Jose, California 95124. Xilinx is engaged in the business of designing, developing, and marketing complete programmable logic solutions, including advanced integrated circuits,

1 software design tools, predefined system functions delivered as intellectual property cores, design
2 services, customer training, field engineering, and customer support.

3 3. Upon information and belief, Defendants Intellectual Ventures I LLC (“IV I”), and
4 Intellectual Ventures II LLC (“IV II”) are Delaware limited liability companies each with their
5 principal place of business at 3150 139th Avenue SE, Building 4, Bellevue, Washington 98005.

6 4. Upon information and belief, each of the Defendants is in the business of acquiring,
7 licensing and/or enforcing patents and patent portfolios.

8 **JURISDICTION AND VENUE**

9 5. This action arises under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 *et seq.*,
10 under the patent laws of the United States, Title 35 of the United States Code. This Court has
11 subject-matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338, 1367, 2201, and 2202.

12 6. This Court has personal jurisdiction over Defendants by virtue of their sufficient
13 minimum contacts with this forum as a result of the business they conduct within the State of
14 California and within the Northern District of California.

15 7. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391(b)-(c) and 1400(b).

16 **INTRADISTRICT ASSIGNMENT**

17 8. For purposes of intradistrict assignment pursuant to Civil Local Rules 3-2(c) and 3-
18 5(b), this Intellectual Property Action is to be assigned on a district-wide basis.

19 **THE PATENTS-IN-SUIT**

20 9. The United States Patent and Trademark Office (the “USPTO”) issued United States
21 Patent No. 6,252,527 (“the ’527 patent”), entitled “Interface Unit for Serial-to-Parallel
22 Conversion and/or Parallel-to-Serial Conversion,” on June 26, 2001. On May 19, 2011, the
23 USPTO granted *ex parte* reexamination of Claims 1-5, 8, 15, 17-22, 27, 29, 32, and 33 (of the 34
24 claims) of the ’527 patent on the basis that a substantial new question of patentability exists as to
25 those claims in light of prior art that was not previously before the USPTO.

26 10. The USPTO issued United States Patent No. 6,408,415 (“the ’415 patent”), entitled
27 “Test Mode Setup Circuit for Microcontroller Unit,” on June 18, 2002. On May 21, 2011, the
28 USPTO granted *ex parte* reexamination of all claims of the ’415 patent on the basis that a

1 substantial new question of patentability exists as to those claims in light of prior art that was not
2 previously before the USPTO.

3 11. The USPTO issued United States Patent No. 6,687,865 (“the ’865 patent”), entitled
4 “On-Chip Service Processor for Test and Debug of Integrated Circuits,” on February 3, 2004. On
5 May 3, 2011, the USPTO granted *ex parte* reexamination of all claims of the ’865 patent on the
6 basis that a substantial new question of patentability exists as to those claims in light of prior art
7 that was not previously before the USPTO.

8 12. The USPTO issued United States Patent No. 6,698,001 (“the ’001 patent”), entitled
9 “Method for Generating Register Transfer Level Code,” on February 24, 2004.

10 13. The USPTO issued United States Patent No. 7,080,301 (“the ’301 patent”), entitled
11 “On-Chip Service Processor,” on July 18, 2006. On May 2, 2011, the USPTO granted *inter*
12 *partes* reexamination of all claims of the ’301 patent on the basis that a substantial new question
13 of patentability exists as to those claims in light of prior art that was not previously before the
14 USPTO, and has issued an Office Action rejecting those claims.

15 **DEFENDANTS AND THEIR ACTIVITIES IN CALIFORNIA**

16 14. Upon information and belief, Intellectual Ventures and Intellectual Ventures
17 Management (“IV Management”) were founded in 1999 and 2000, respectively, by Nathan
18 Myhrvold, Edward Jung, Peter Detkin and Greg Gorder. Upon information and belief,
19 Intellectual Ventures and IV Management have the same directors and management and
20 otherwise appear to operate as a single entity.

21 15. In a recent complaint filed with the U.S. International Trade Commission, IV
22 Management stated that it “oversees the entire family of companies known in the industry . . . as
23 ‘Intellectual Ventures.’” Certain Dynamic Random Access Memory and Nand Flash Memory
24 Devices and Products Containing Same, Inv. No. 337-TA-___, USITC Docket No. 2829 (July 12,
25 2011), ¶ 7.

26 16. Together Intellectual Ventures and IV Management make up what has been called
27 one of the world’s largest patent holding companies. Intellectual Ventures and IV Management
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1 claim to own rights to more than 30,000 patents and patent applications, which they acquire,
2 group into portfolios, and market to investors through their private IP funds (“IP Funds”).

3 17. Upon information and belief, Intellectual Ventures and IV Management own the IP
4 in their portfolio through a network of IV affiliates and holding companies. Upon information
5 and belief, Defendants IV I and IV II are two such affiliates or holding companies.

6 18. Intellectual Ventures and/or IV Management maintain an office and employees
7 within this District. Upon information and belief, Mr. Joe Chernesky, a Vice President and
8 General Manager of Intellectual Ventures and IV Management’s Hardware Intellectual Property
9 group, and Mr. Mark Wilson, a Licensing Executive, both work at Intellectual Ventures and IV
10 Management’s Silicon Valley office.

11 19. In 2004, Xilinx was approached by Intellectual Ventures and IV Management about
12 becoming an investor in one of their IP Funds, Intellectual Ventures Fund I (“Fund I”). During
13 the course of the negotiations, representatives from Intellectual Ventures and IV Management,
14 including Peter Detkin and/or Gregory Gorder, communicated with Xilinx by email and
15 telephone, and attended in-person meetings with Xilinx in California.

16 20. In 2005, following extensive negotiations, Xilinx and various companies related to
17 Intellectual Ventures and IV Management executed several agreements pursuant to which Xilinx
18 became a limited partner of Fund I. Xilinx’s representatives executed the agreements in San Jose,
19 California on behalf of Xilinx.

20 21. In 2008, after several months of negotiations again initiated by representatives from
21 Intellectual Ventures and IV Management, Xilinx became a non-managing member of Intellectual
22 Ventures Fund II (“Fund II”).

23 22. Also in 2008, Defendants Intellectual Ventures and/or IV Management, and their
24 affiliate Fund I, issued acquisition notices informing Xilinx that Fund I acquired an interest in the
25 ’865 and ’301 patents.

26 23. In 2009, Defendants Intellectual Ventures and/or IV Management, and their affiliate
27 Fund II, issued an acquisition notice informing Xilinx that Fund II acquired an interest in the
28 ’527, ’415, and ’001 patents.

1 31. IV I and/or IV II claim to be the owner and assignee of all rights, title, and interest in
2 and under the '527 patent.

3 32. Defendants have accused Xilinx of infringing at least Claim 1 of the '527 patent
4 through its manufacture, sale, offering for sale, use, and/or importation of certain integrated
5 circuits that allegedly convert between serial and parallel data in response to a mode signal,
6 including Xilinx's Virtex-5 GTX Transceiver, and have asserted that Xilinx must take a license to
7 the '527 patent to lawfully continue the manufacture, sale, offering for sale, use, and/or
8 importation of such integrated circuits.

9 33. Xilinx has informed Defendants that Xilinx contends it has the right to engage in the
10 manufacture, sale, offering for sale, use, and/or importation of these integrated circuits without a
11 license to the '527 patent.

12 34. Under all the circumstances in this dispute, Defendants have, at a minimum, created
13 a substantial, immediate, and real controversy between the parties as to the non-infringement of
14 the '527 patent. A valid and justiciable controversy has arisen and exists between Xilinx and
15 Defendants within the meaning of 28 U.S.C. § 2201.

16 35. Upon information and belief, Xilinx has not directly or indirectly infringed any valid
17 and enforceable claim of the '527 patent, either literally or under the doctrine of equivalents
18 because none of its integrated circuits, including Xilinx's Virtex-5 GTX Transceiver, practice
19 Claim 1 or any valid claim of the '527 patent.

20 36. A judicial declaration of non-infringement of the '527 patent is necessary and
21 appropriate in order to resolve this controversy.

22 **SECOND COUNT**

23 **(Declaratory Judgment of Invalidity of the '527 Patent)**

24 37. The allegations contained in paragraphs 1 through 36 are incorporated by reference
25 as if fully set herein.

26 38. Under all the circumstances in this dispute, Defendants have, at a minimum, created
27 a substantial, immediate, and real controversy between the parties as to the invalidity of the '527
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1 patent. A valid and justiciable controversy has arisen and exists between Xilinx and Defendants
2 within the meaning of 28 U.S.C. § 2201.

3 39. Upon information and belief, the '527 patent is invalid because of its failure to
4 comply with one or more of the requirements of the patent laws of the United States, including,
5 without limitation, at least 35 U.S.C. §§ 102, 103, and/or 112.

6 40. At least Claims 1-5, 8, 15, 17-22, 27, 29, 32, and 33 of the '527 patent are invalid as
7 anticipated and/or obvious over multiple prior art references that were not before the patent
8 examiner during the prosecution of the '527 patent, including but not limited to U.S. Patent Nos.
9 5,371,736; 4,823,312; and 5,982,309. Had the patent examiner known or been made aware of
10 these prior art references, the claims would not have been allowed and the '527 patent would not
11 have issued.

12 41. The USPTO has already determined that these references raise a substantial new
13 question of patentability of the '527 patent.

14 42. At least Claims 4 and 18 of the '527 patent are not sufficiently definite to “distinctly
15 claim[] the subject matter which the applicant regards as his invention,” as required by 35 U.S.C.
16 § 112. Two such examples of claim limitations that are indefinite under § 112 are “a mod 3 clock
17 signal” and “a mod 4 clock signal.”

18 43. Xilinx will provide additional and more detailed invalidity contentions as required
19 by Patent Local Rules 3-3 and 3-5 in the time period prescribed by those Rules, or as otherwise
20 ordered by the Court.

21 44. A judicial declaration of invalidity of the '527 patent is necessary and appropriate in
22 order to resolve this controversy.

23 **THIRD COUNT**

24 **(Declaratory Judgment of Non-Infringement of the '415 Patent)**

25 45. The allegations contained in paragraphs 1 through 44 are incorporated by reference
26 as if fully set herein.

27 46. IV I and/or IV II claim to be the owner and assignee of all rights, title, and interest in
28 and under the '415 patent.

1 62. Defendants have accused Xilinx of infringing one or more claims of the '865 patent
2 through its manufacture, sale, offering for sale, use, and/or importation of certain integrated
3 circuits that allegedly contain built-in test and debug functionality, including Xilinx's FPGA
4 products, and have asserted that Xilinx must take a license to the '865 patent to lawfully continue
5 the manufacture, sale, offering for sale, use, and/or importation of such integrated circuits.

6 63. Xilinx has informed Defendants that Xilinx has the right to engage in the
7 manufacture, sale, offering for sale, use, and/or importation of these integrated circuits without a
8 license to the '865 patent.

9 64. Under all the circumstances in this dispute, Defendants have, at a minimum, created
10 a substantial, immediate, and real controversy between the parties as to the non-infringement of
11 the '865 patent. A valid and justiciable controversy has arisen and exists between Xilinx and
12 Defendants within the meaning of 28 U.S.C. § 2201.

13 65. Upon information and belief, Xilinx has not directly or indirectly infringed any valid
14 and enforceable claims of the '865 patent, either literally or under the doctrine of equivalents
15 because none of its FPGA products, including at least the Virtex-4 Series, practice any valid
16 claim of the '865 patent.

17 66. A judicial declaration of non-infringement of the '865 patent is necessary and
18 appropriate in order to resolve this controversy.

19 **SIXTH COUNT**

20 **(Declaratory Judgment of Invalidity of the '865 Patent)**

21 67. The allegations contained in paragraphs 1 through 66 are incorporated by reference
22 as if fully set herein.

23 68. Under all the circumstances in this dispute, Defendants have, at a minimum, created
24 a substantial, immediate, and real controversy between the parties as to the invalidity of the '865
25 patent. A valid and justiciable controversy has arisen and exists between Xilinx and Defendants
26 within the meaning of 28 U.S.C. § 2201.

69. Upon information and belief, the '865 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, at least 35 U.S.C. §§ 102, 103, and/or 112.

70. At least Claims 1-22 of the '865 patent are invalid as anticipated and/or obvious over multiple prior art references that were not before the patent examiner during the prosecution of the '865 patent, including but not limited to Yervant Zorian, "Test Requirements for Embedded Core-based Systems and IEEE P1500," International Test Conference 1997 (ITC '97), November 1-6, 1997; and Manoj Franklin and Kewal K. Saluja, "Built-in Self-Testing of Random-Access Memories," Computer, October 1990. Had the patent examiner known or been made aware of these prior art references, the claims would not have been allowed and the '865 patent would not have issued.

71. The USPTO has already determined that these references raise a substantial new question of patentability of the '865 patent.

72. At least Claims 1-12 of the '865 patent are not sufficiently definite to "distinctly claim[] the subject matter which the applicant regards as his invention," as required by 35 U.S.C. § 112. One such example of a claim limitation that is indefinite under § 112 is "an end of a logic analyzer channel."

73. Xilinx will provide additional and more detailed invalidity contentions as required by Patent Local Rules 3-3 and 3-5 in the time period prescribed by those Rules, or as otherwise ordered by the Court.

74. A judicial declaration of invalidity of the '865 patent is necessary and appropriate in order to resolve this controversy.

SEVENTH COUNT

(Declaratory Judgment of Non-Infringement of the '001 Patent)

75. The allegations contained in paragraphs 1 through 74 are incorporated by reference as if fully set herein.

76. IV I and/or IV II claim to be the owner and assignee of all rights, title, and interest in and under the '001 patent.

1 77. Defendants have accused Xilinx of infringing one or more claims of the '001 patent
2 through its manufacture, sale, offering for sale, use, and/or importation of certain products that
3 allegedly practice methods for generating a register transfer level (RTL) code for very large scale
4 integrated circuit VLSI design, and have asserted that Xilinx must take a license to the '001
5 patent to lawfully continue the manufacture, sale, offering for sale, use, and/or importation of
6 such products.

7 78. Xilinx has informed Defendants that Xilinx has the right to engage in the
8 manufacture, sale, offering for sale, use, and/or importation of these products without a license to
9 the '001 patent.

10 79. Under all the circumstances in this dispute, Defendants have, at a minimum, created
11 a substantial, immediate, and real controversy between the parties as to the non-infringement of
12 the '001 patent. A valid and justiciable controversy has arisen and exists between Xilinx and
13 Defendants within the meaning of 28 U.S.C. § 2201.

14 80. Upon information and belief, Xilinx has not directly or indirectly infringed any valid
15 and enforceable claims of the '001 patent, either literally or under the doctrine of equivalents
16 because none of Xilinx's design products, including at least ISE® Design Suite, practice any
17 valid claim of the '001 patent.

18 81. A judicial declaration of non-infringement of the '001 patent is necessary and
19 appropriate in order to resolve this controversy.

20 **EIGHTH COUNT**

21 **(Declaratory Judgment of Invalidity of the '001 Patent)**

22 82. The allegations contained in paragraphs 1 through 81 are incorporated by reference
23 as if fully set herein.

24 83. Under all the circumstances in this dispute, Defendants have, at a minimum, created
25 a substantial, immediate, and real controversy between the parties as to the invalidity of the '001
26 patent. A valid and justiciable controversy has arisen and exists between Xilinx and Defendants
27 within the meaning of 28 U.S.C. § 2201.

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1 92. Defendants have accused Xilinx of infringing at least Claim 4 of the '301 patent
2 through its manufacture, sale, offering for sale, use, and/or importation of certain integrated
3 circuits allegedly containing an ARM dual-core CortexTMA9 MPCore Processor, and have
4 asserted that Xilinx must take a license to the '301 patent to lawfully continue the manufacture,
5 sale, offering for sale, use, and/or importation of such integrated circuits.

6 93. Xilinx has informed Defendants that Xilinx has the right to engage in the
7 manufacture, sale, offering for sale, use, and/or importation of these integrated circuits without a
8 license to the '301 patent.

9 94. Under all the circumstances in this dispute, Defendants have, at a minimum, created
10 a substantial, immediate, and real controversy between the parties as to the non-infringement of
11 the '301 patent. A valid and justiciable controversy has arisen and exists between Xilinx and
12 Defendants within the meaning of 28 U.S.C. § 2201.

13 95. Upon information and belief, Xilinx has not directly or indirectly infringed any valid
14 and enforceable claims of the '301 patent, either literally or under the doctrine of equivalents
15 because none of its integrated circuits allegedly containing an ARM dual-core CortexTMA9
16 MPCore Processor, including at least Xilinx's 28 nm programmable logic products such as the 7
17 Series FPGAs, practice Claim 4 or any valid claim of the '301 patent.

18 96. A judicial declaration of non-infringement of the '301 patent is necessary and
19 appropriate in order to resolve this controversy.

20 **TENTH COUNT**

21 **(Declaratory Judgment of Invalidity of the '301 Patent)**

22 97. The allegations contained in paragraphs 1 through 96 are incorporated by reference
23 as if fully set herein.

24 98. Under all the circumstances in this dispute, Defendants have, at a minimum, created
25 a substantial, immediate, and real controversy between the parties as to the invalidity of the '301
26 patent. A valid and justiciable controversy has arisen and exists between Xilinx and IV within the
27 meaning of 28 U.S.C. § 2201.

1 99. Upon information and belief, the '301 patent is invalid because of its failure to
2 comply with one or more of the requirements of the patent laws of the United States, including,
3 without limitation, at least 35 U.S.C. §§ 102, 103, and/or 112.

4 100. At least Claims 1-6 of the '301 patent are invalid as anticipated and/or obvious over
5 multiple prior art references that were not before the patent examiner during the prosecution of
6 the '301 patent, including but not limited to Yervant Zorian, "Test Requirements for Embedded
7 Core-based Systems and IEEE P1500," International Test Conference 1997 (ITC '97), November
8 1-6, 1997; and Manoj Franklin and Kewal K. Saluja, "Built-in Self-Testing of Random-Access
9 Memories," Computer, October 1990. Had the patent examiner known or been made aware of
10 these prior art references, the claims would not have been allowed and the '301 patent would not
11 have issued.

12 101. The USPTO has already determined that these references raise a substantial new
13 question of patentability of the '301 patent, and has issued an Office Action rejecting all claims of
14 the '301 patent.

15 102. At least Claims 1-6 of the '301 patent are not sufficiently definite to "distinctly
16 claim[] the subject matter which the applicant regards as his invention," as required by 35 U.S.C.
17 § 112. One such example of claim limitations that are indefinite under § 112 is "normal system
18 operation."

19 103. Xilinx will provide additional and more detailed invalidity contentions as required
20 by Patent Local Rules 3-3 and 3-5 in the time period prescribed by those Rules, or as otherwise
21 ordered by the Court.

22 104. A judicial declaration of invalidity of the '301 patent is necessary and appropriate in
23 order to resolve this controversy.

24 **PRAYER FOR RELIEF**

25 WHEREFORE, Xilinx requests that the Court enter judgment in its favor and against
26 Intellectual Ventures I LLC and Intellectual Ventures II LLC, and requests the following relief:

- 27 (A) An adjudication that the '527, '415, '865, '001, and '301 patents
28 (collectively, the "Asserted Patents") are not infringed by Xilinx's

1 importation, use, offer for sale, and/or sale in the United States of the
2 Accused Products, including the Spartan-3 Family, Virtex-II Series, and
3 Virtex-4 Series FPGAs, the Virtex-5 GTX Transceiver, the 28 nm
4 programmable logic products containing an ARM dual-core CortexTMA9
5 MPCore Processor such as the 7 Series FPGAs, and the ISE[®] Design
6 Suite;

7 (B) An adjudication that the Asserted Patents are invalid;

8 (C) An adjudication in favor of Xilinx on each of Xilinx's claims;

9 (D) An adjudication that this is an exceptional case, and an award of Xilinx's
10 costs and attorneys' fees by Defendants pursuant to 35 U.S.C. § 285 or
11 otherwise; and

12 (E) Such other relief as this Court deems just and proper.
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